CANCER INCIDENCE IN MASSACHUSETTS 1996 – 2000:

CITY AND TOWN SUPPLEMENT

Center for Health Information, Statistics, Research and Evaluation

Massachusetts Department of Public Health

April 2004

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April 2004

Massachusetts Department of Public Health

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- at the Massachusetts Department of Public Health (for Massachusetts information):

  Center for Health Information, Statistics, Research and Evaluation
  Massachusetts Cancer Registry 617-988-3380

  Center for Environmental Health
  Community Assessment Program..... 617-624-5757

  Center for Community Health
  Comprehensive Cancer Prevention and Control Program..... 617-624-5070

  Massachusetts Department of Public Health website..... www.state.ma.us/dph

- for U.S. data, information on treatment and screening, and further information on risk factors:

  National Cancer Institute, Cancer Information Service..... 1-800-422-6237
  National Cancer Institute website ..... www.cancer.gov

  American Cancer Society, New England..... 1-800-227-2345
  American Cancer Society website ..... www.cancer.org

  Centers for Disease Control and Prevention 1-800-311-3435
  Centers for Disease Control and Prevention website..... www.cdc.org

  North America Association of Central Cancer Registries..... www.naaccr.org

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INTRODUCTION

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The purpose of this report is to provide standardized incidence ratios (SIRs) for twenty-three types of cancer and all cancer types combined in the 351 cities and towns of Massachusetts for the five-year time period 1996 through 2000. An SIR is an estimate of the occurrence of cancer in a population relative to what might be expected if the population had the same cancer experience as some larger comparison population. Usually, the state as a whole is selected to be the comparison population.

The report is organized into the following six sections:

CITY / TOWN CANCER INCIDENCE summarizes the data tabulated in this report.

METHODS provides a detailed explanation of the data collection, data processing and statistical techniques employed in this report.

TABLES present data for selected types of cancer by city/town and sex.

APPENDIX I provides a listing of International Classification of Diseases for Oncology codes used for the preparation of this report.

APPENDIX II provides a listing of risk factors for selected cancer types and a listing of the individuals who reviewed the risk factor list.

APPENDIX III describes current Massachusetts Department of Public Health efforts to reduce the risk of specific cancers and provides a list of related educational materials.

Comparison with Previous Reports

This report updates previous annual reports published by the Massachusetts Cancer Registry (MCR). Hard-copy versions of these reports are published every five years, and on-line versions are updated annually. The data contained in this on-line report are also available by contacting the MCR:

Massachusetts Cancer Registry
Center for Health Information, Statistics, Research and Evaluation
Massachusetts Department of Public Health
2 Boylston Street / 6th Flr
Boston, MA 02116-4704
telephone 617-988-3380; fax 617-988-3277

The preceding report, ***1995-1999 City and Town Supplement***, included data for diagnosis years 1995 through 1999. This report contains data for diagnosis years 1996 through 2000. There have been no changes in this report's format.

It is important to note that the standardized incidence ratios (SIRs) presented in this report ***cannot be compared*** with SIRs in the ***1995-1999 City and Town Supplement*** because the numbers of expected cases used to calculate SIRs in the earlier publication were based on 1997 city/town population

estimates; in this report, the city/town population estimates used to calculate expected case counts were for 1998. See ***Expected and Observed Case Counts*** on page 5 for further information

Information on cancer control programs of the Massachusetts Department of Public Health is available in Appendix III of this report and elsewhere on the Department's website (www.state.ma.us/dph/cancerct/home.htm). Cancer incidence and mortality data are also available through MassCHIP (http://masschip.state.ma.us), the Department's Internet-based public access information service. MassCHIP provides users with detailed health data on a variety of geographic levels while protecting data confidentiality.

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CITY / TOWN CANCER INCIDENCE, 1996 - 2000

Content

Each city and town in Massachusetts is listed alphabetically in the **TABLES** section. The expected number of cases, the observed number of cases, and standardized incidence ratios are presented for twenty-three main types of cancer and for all cancer types combined.[1] The all cancers combined category includes the twenty three main types presented in this report and other malignant neoplasms. This category is meant to provide a summary of the total cancer experience in a community. As different cancers have different causes, this category does not reflect any specific risk factor that may be important for this community.

Next to the number of observed cases for each cancer type in a city/town is the corresponding SIR. Any SIR value that is not followed by a symbol described below is not statistically significant at the levels of significance testing used in this report.

A pound symbol (#) following an SIR value indicates that this cancer incidence excess (#+) or deficit (#-) is statistically significant at the $\mathbf{p} \leq 0.05$ level.

A tilde symbol (~) following an SIR indicates that this cancer excess (~+) or deficit (~-) is statistically significant at the $\mathbf{p} \leq 0.01$ level.

A caret symbol (^) following an SIR indicates that this cancer excess (^+) or deficit (^-) is statistically significant at the $\mathbf{p} \leq 0.001$ level.

(See ***Measures of Statistical Significance*** on page 6 for a detailed discussion of the significance testing used in this report.)

Whenever the number of observed cases was less than five, the corresponding SIR was neither calculated nor tested for statistical significance. This is indicated with an SIR of "not calculated" followed by an asterisk (NC*). The number of observed and expected cases *is* shown in these circumstances.

[1] The number of *cases* for a certain type of cancer is not necessarily equivalent to the number of *people* with that type of cancer. A single person may contribute multiple cases to an observed number of cases.

Interpretation of the Data

The information contained in this report and in the data tables does not provide proof of the association of individual risk factors with cancer excesses in any town, but rather should be used as a guide for further surveillance, epidemiologic investigations, and other public health activities.

When reviewing the data tables, it is important to keep in mind that an SIR compares the observed cancer incidence in a particular community with the expected incidence based on statewide average age-specific incidence rates. This means that *valid comparisons can only be made between a community and the state as a whole*. *SIRs for different cities and towns **CANNOT*** and ***SHOULD NOT** be compared to each other*. (Comparisons between two communities would be valid only if there were no differences in the age and sex distributions of the two communities' populations.)

METHODS

Data Collection

The Massachusetts Cancer Registry (MCR) collects reports of all newly[2] diagnosed cancer cases from all Massachusetts acute care hospitals and one health maintenance organization (76 reporting facilities in 2000). The MCR compiles summaries of cancer incidence, such as this report, and also produces special reports. These undertakings require data collection efforts that necessitate extensive interaction with hospital tumor registrars. Intensive data evaluation is also required to ensure data quality. The fundamental requirements of any central cancer registry include: (1) complete registration, (2) prevention of case duplication, (3) collection of uniform data, i.e., standardization of items, definitions, rules, classification and nomenclature of primary site, histology, staging and procedures, (4) quality control, and (5) efficient data processing.

MCR case ascertainment improved during the years covered by this report. For diagnosis year 2000, the MCR's total case count was estimated by the North American Association of Central Cancer Registries to be complete. This report includes (for the diagnosis years indicated) two case sources that were not available for most previous editions of the *City and Town Supplement* -- physician office cases reported by hospitals and death certificate-only cases: for diagnosis years 1996 and onward, the MCR collects information from reporting hospitals, where available, on cases diagnosed and treated in staff physician offices. Not all hospitals report this type of case, however, and some hospitals report such cases as if the patients had been diagnosed and treated by the hospital directly. Collecting this type of data makes the MCR's overall case ascertainment more complete. Because these cases are not reported by every hospital however, reporting is more complete in some geographic areas than in others. Physician office cases most often reported to the MCR are prostate cancers and melanomas.

For diagnosis years 1997 through 2000, the MCR identified previously unreported cancer cases through death certificate clearance to further improve case completeness. In some instances a cancer-related cause of death recorded on a Massachusetts death certificate is the *only* source of information for a cancer case.

These "death certificate-only" cancer diagnoses are therefore poorly documented and have not been medically confirmed (confirmed by review of complete clinical information). Such cases are included

[2] In keeping with national data standards, the recurrence of a previously diagnosed cancer should also be reported to the MCR in certain circumstances.

in this report for diagnosis years 1997, 1998 1999, and 2000; they comprise approximately 2% of all cancer cases for these years.

Coding for cancer types in this report follows the International Classification of Diseases for Oncology (Second Edition) system (see **APPENDIX I** on page 365). The list of reportable neoplasms is essentially the same as that used for the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program data, with the exception of *in situ* neoplasms. The MCR began collecting information on *in situ* neoplasms diagnosed as of January 1, 1992; however, *in situ cases are **not** included in this report.* You may contact the MCR for information on *in situ* neoplasms.

The data summarized in this report are drawn from data entered on MCR computer files on or before **October, 1, 2003**. The numbers presented in this report may change slightly in future reports, reflecting late reported cases, address corrections, or other changes based on subsequent details from reporting facilities. Additionally, using different population estimates or statistical methodologies, such as grouping ages differently or rounding off numbers at different points during calculations, may also produce results slightly different from those published in this report.

Data Presentation

Three measures of cancer incidence are presented in this report's data tables: expected case counts, observed case counts, and standardized incidence ratios (SIRs).

Expected and Observed Case Counts

A city/town's *expected* case count (**Exp**) for a certain type of cancer for this time period is a calculated number based on that city/town's population distribution (by sex and among six age groups) for 1998 (the midpoint of 1996 through 2000), and the corresponding statewide average age-specific incidence rates. See ***Calculation of an SIR*** (page 7) for an example of how a hypothetical expected count is calculated. The expected case counts in this report are rounded to the nearest hundredth (two decimal places). If the total expected case count is not exactly equal to the sum of the male and female expected counts, this is attributable to rounding error.

For the computation of statewide average age-specific incidence rates used for this report, the 1998 statewide population estimates (by sex and six age groups) were obtained from the Massachusetts Institute for Social and Economic Research (MISER). Different methodologies may be used to derive slightly different population estimates, yielding slightly different results.

In this report, the *observed* case count (**Obs**) for a particular type of cancer in a city/town is the actual number of newly[3] diagnosed cases reported to have been diagnosed in residents of that city/town from 1996 through 2000. The "Total" observed case count for each cancer type is the sum of the number of observed male and female cases only. The MCR added two additional gender classifications (transsexuals and persons with sex chromosome abnormalities/hermaphrodites) for cases diagnosed as of January 1, 1995. (Cases diagnosed before this date were limited to male or female only.) Any case classified in either of the new gender categories[4] is *not* included in this report because the population data used in the statistical calculations include only male and female categories.

Standardized Incidence Ratios

The data tables present SIRs (rounded to the nearest whole number) for males, females and the total population of each city/town for twenty-three types of cancer and for all cancers combined. An SIR is an indirect method of adjustment for age and sex that describes in numerical terms how a city/town's average experience in 1996-2000 compared with that of the state as a whole. The SIR is a useful tool for screening incidence data and generating leads for further public health investigations.

- An SIR of *exactly 100* indicates that a city/town's incidence for a certain type of cancer is *equal to that expected* based on statewide average age-specific incidence rates.
- An SIR of *more than 100* indicates that a city/town's incidence for a certain type of cancer is *higher than expected* for that type of cancer based on statewide average age-specific incidence rates. For example, an SIR of 105 indicates that a city/town's cancer incidence is 5% higher than expected based on statewide average age-specific incidence rates.

[3] In certain circumstances the recurrence of a previously diagnosed cancer is also included here.
[4] Nineteen cases classified in the new gender categories are recorded at the MCR for 1996-2000.

- An SIR of *less than 100* indicates that a city/town's incidence for a certain type of cancer is *lower than expected* based on statewide average age-specific incidence rates. For example, an SIR of 85 indicates that a city/town's cancer incidence is 15% lower than expected based on statewide average age-specific incidence rates.

Measures of Statistical Significance

Tests of statistical significance allow an estimate of the probability (referred to as a "**p**" value) that the difference between the observed and expected case count is due to chance alone. A **p** value of less than or equal to 5% (**p**≤0.05) means that there is, at most, a 5% chance that the difference between the observed and expected case count is due to chance alone; thus, a cancer excess or deficit with such a **p** value is considered statistically significant. *The presence or absence of statistical significance does not necessarily imply biological or public health significance.*

In this report, three levels of statistical significance are employed to identify cities and towns with excess cancer incidence (and deficits) as compared with statewide average incidence -- **p**≤0.05, **p**≤0.01, and **p**≤0.001. The use of **p**≤0.001 highlights those cancer excesses least likely to have occurred by chance alone. Use of this stringent criteria, however, makes it difficult to identify elevated SIRs for towns with relatively small populations and small numbers of cancer cases. The use of **p**≤0.05 constitutes a less stringent criterion and identifies a greater number of cancer excesses. Use of **p**≤0.05 can provide investigators with a broader context for identifying patterns of excess cancer incidence than use of **p**≤0.01 or **p**≤0.001.

p≤0.05: In the data tables, **p**≤0.05 is used to identify cancer types having significant excesses or deficits at the least stringent level used herein. This indicates that there is, at most, 1 chance in 20 that the identified excess or deficit of cancer cases is due to chance alone. A pound symbol (#) following an SIR marks that excess or deficit as statistically significant at the **p**≤0.05 level, but not at the higher levels (**p**≤0.01 and **p**≤0.001). Based on the number of tests performed for this report (eighteen male/female sites and five single-sex sites), one would expect by chance alone to find **360** significant excesses at this **p** level; **353** were found.

p≤0.01: A **p** value of less than or equal to 0.01 indicates that there is, at most, 1 chance in 100 that the excess or deficit of cancer cases is due to chance alone. (All cancer excesses and deficits which are statistically significant at this level are also significant at the less stringent **p**≤0.05 level, but not all data significant at the **p**≤0.05 level are significant at the **p**≤0.01 level.) A tilde symbol (~) following an SIR indicates that these data are significant at both the **p**≤0.05 and **p**≤0.01 levels, but not at the more stringent **p**≤0.001 level. Based on the number of tests performed for this report, one would expect by chance alone to find **72** significant excesses at the **p**≤0.01 level; **151** were found.

p≤0.001: This is the most stringent criterion employed in this report to highlight cancer excesses and deficits that are least likely to be due to chance alone. This **p** value indicates that there is, at most, 1 chance in 1000 that the excess or deficit in observed cases is due to chance alone. A caret symbol (^) following an SIR indicates that these data are significant at all three levels of significance testing used here. Based on the number of tests performed for this report, one would expect by chance alone to find **7** significant excesses at the **p**≤0.001 level; **58** were found.

Calculation of an SIR

$$SIR = \frac{\text{OBSERVED CASES}}{\text{EXPECTED CASES}} X\ 100$$

The following example illustrates the method of calculation for a hypothetical town for one type of cancer for the year 1997:

Age Group	Town X Population (A)	State Age-Specific Incidence Rate (B)	Town X Expected Cases (C) = (A) x (B)	Town X Observed Cases (D)
0-19	74,657	0.0001	7.47	11
20-44	134,957	0.0002	26.99	25
45-64	54,463	0.0005	27.23	30
65-74	25,136	0.0015	37.70	40
75-84	17,012	0.0018	30.62	30
85+	6,337	0.0010	6.34	8
			total: 136.35	**144**

$$SIR = \frac{\text{Observed Cases}}{\text{Expected Cases}} X\ 100 = \frac{\text{(column D total)}}{\text{(column C total)}} X\ 100 = \frac{144}{136.35} X\ 100 \cong 106$$

Thus the SIR for this type of cancer in Town X is 106, indicating that the incidence of this cancer in Town X is approximately 6% higher than the corresponding statewide average incidence for this cancer.

Data Limitations

It should be remembered that apparent increases or decreases in cancer incidence over time may reflect changes in diagnostic methods or case reporting rather than true changes in cancer incidence. Three other limitations must be considered when interpreting cancer incidence data for Massachusetts cities and towns: under-reporting in areas close to neighboring states; under-reporting for cancers that may not be diagnosed in hospitals; and cases being assigned to incorrect cities/towns.

Border Areas and Neighboring States

Some areas of Massachusetts appear to have low cancer incidence, but this may be the result of under-reporting -- that is, a loss of cases diagnosed or treated in neighboring states that are not reported to the MCR. Presently the MCR has reciprocal reporting agreements with fifteen states -- Alaska, Arkansas, Connecticut, Florida, Maine, Mississippi, New Hampshire, New York, North Carolina, Rhode Island, South Carolina, Texas, Vermont, Wisconsin and Wyoming.

Cases Diagnosed in Non-Hospital Settings

During the time period covered by this report (1996 through 2000), the MCR's information sources for nearly all cancer cases were hospitals. Some types of cancer in this report are undoubtedly under-reported because they may be diagnosed by private physicians, private laboratories, health maintenance organizations or radiotherapy centers that escape hospital case identification systems. Examples may include melanoma of skin, prostate cancer, and certain hematologic malignancies such as leukemia and multiple myeloma. The extent of this under-reporting has not been determined exactly. However, the North American Association of Central Cancer Registries has estimated the overall completeness for the period 1997 to 2000 to be 99.5%.

City/Town Misassignment

In accordance with standard central cancer registry procedures, each case reported to the MCR should ideally be assigned to the city/town in which the patient lived at the time of diagnosis, based on the address provided by the reporting hospital. In practice, however, a patient may provide the hospital with his/her mailing address (e.g., a post office box located outside the patient's city/town of residence); a business address; a temporary address (e.g., the patient is staying with a relative while receiving treatment and reports the relative's address as his/her own); or a locality or post office name (e.g., "Chestnut Hill" rather than "Boston", "Brookline" or "Newton"). In addition, if a patient has moved since being diagnosed, the hospital may report the patient's current address. Because of the large number of cases reported to the MCR, and because data are reported to the MCR via electronic media, most city/town case assignments are performed by an automated computer process. This simplified matching process may misassign some cases based on the reported locality name. When MCR staff become aware of such misassignments, the errors are corrected manually. Furthermore, in order to minimize such errors, cases from fifty geographic localities prone to city/town misassignment are reviewed manually by the MCR.

TABLES

APPENDICES

APPENDIX I: INTERNATIONAL CLASSIFICATION OF DISEASES FOR ONCOLOGY (SECOND EDITION) CODES USED FOR THIS REPORT [1]

Cancer Site / Type	Primary Site Codes	Histologic Type Codes [2]
Bladder, Urinary	C67.0 - C67.9	all except 9590 - 9989
Brain and Other Central Nervous System	C70.0 - C72.9	all except 9590 - 9989
Breast	C50.0 - C50.9	all except 9590 - 9989
Cervix Uteri (cervical cancer)	C53.0 - C53.9	all except 9590 - 9989
Colon / Rectum	C18.0 - C18.9, C19.9, C20.9, C26.0	all except 9590 - 9989
Esophagus	C15.0 - C15.9	all except 9590 - 9989
Hodgkin's Disease	C00.0 - C80.9	9650 - 9667
Kidney and Renal Pelvis [3]	C64.9, C65.9	all except 9590 - 9989
Larynx	C32.0 - C32.9	all except 9590 - 9989
Leukemia	C00.0 - C80.9 C42.0, C42.1, C42.4	9800 - 9822, 9824-9826, 9828-9941 9823, 9827
Liver and Intrahepatic Bile Ducts	C22.0, C22.1	all except 9590 - 9989
Lung and Bronchus	C34.0 - C34.9	all except 9590 - 9989
Melanoma of Skin	C44.0 - C44.9	8720 - 8790
Multiple Myeloma	C00.0 - C80.9	9731, 9732
Non-Hodgkin's Lymphoma	C00.0 - C80.9	9590 - 9595, 9670 - 9717
Oral Cavity and Pharynx	C00.0 - C14.8	all except 9590 - 9989
Ovary	C56.9	all except 9590 - 9989
Pancreas	C25.0 - C25.9	all except 9590 - 9989
Prostate	C61.9	all except 9590 - 9989
Stomach	C16.0 - C16.9	all except 9590 - 9989
Testis	C62.0 - C62.9	all except 9590 - 9989
Thyroid	C73.9	all except 9590 - 9989
Uteri, Corpus and Uterus, NOS	C54.0 - C54.9, C55.9	all except 9590 - 9989
All Sites / Types	C00.0 - C80.9	8000 - 9989

[1] includes codes added to the *International Classification of Diseases for Oncology, Second Edition* since its publication

[2] Only invasive cancers (those with invasive behaviors) are included in this publication. Non-invasive (*in situ*) cancers are not included.

[3] Massachusetts hospital coding conventions may have assigned some cases to a "not otherwise specified" site category that is not included in this cancer type.

APPENDIX II: RISK FACTORS FOR SELECTED CANCER TYPES AND REVIEWERS OF RISK FACTORS

This Appendix contains a list of risk factors for thirteen types of cancer. The list briefly summarizes available information from the scientific literature. The list was last revised in 2000. Cancers are complex diseases, many of which have multiple factors that may contribute to their development. It should be noted that there is no single agreed-upon list of risk factors -- even the experts may disagree. This list should be viewed only as a starting point for the interested reader, and should not be viewed as constituting a definitive or comprehensive summary of cancer risk factors. Future risk factor lists may change as new research findings emerge.

The list separates those characteristics for which research clearly indicates a strong association in the development of the cancer ("Risk Factors") from those characteristics for which weaker associations exist ("Possible Risk Factors") or which are now coming under investigation ("Under Investigation").

For additional information on cancer risk factors or prevention, you may wish to contact the following:

Cancer Information Service (National Cancer Institute): 1-800-4-CANCER
Cancer Response Line (American Cancer Society): 1-800-ACS-2345

In addition, the following selected Internet websites provide information on cancer. Many of these also provide links to other sites (not listed) which may be of interest.

Massachusetts Department of Public Health: http://www.state.ma.us/dph

American Cancer Society: http://www.cancer.org

Centers for Disease Control and Prevention
Home Page: http://www.cdc.gov
Cancer Prevention and Control Program: http://www.cdc.gov/cancer

National Cancer Institute
Information: http://www.cancer.gov
CANCERLIT® (literature): http://www.cancer.gov/search/cancer_literature
SEER data: http://seer.cancer.gov
5-A-Day Program (nutrition): http://www.5aday.gov

Harvard Center for Cancer Prevention
Home Page: http://www.hsph.harvard.edu/cancer
Your Cancer Risk: http://www.yourcancerrisk.harvard.edu

OncoLink (University of Pennsylvania Cancer Center): http://www.oncolink.upenn.edu

Cancer News on the Net® (information on diagnosis and treatment for cancer patients and their families): http://www.cancernews.com

National Coalition for Cancer Survivorship: http://www.canceradvocacy.org

BLADDER, URINARY

Risk Factors:

- Age (In Massachusetts, incidence rates increase markedly in the 65 to 74 year age group, and are highest in the 75 years and older age groups.)
- Cigarette smoking
- Excessive use of certain pain medications such as those containing phenacetin
- Treatment with alkylating agent chemotherapy drugs such as Cytoxan (cyclophosphamide)
- Having had radiation therapy to the bladder

Possible Risk Factors:

- Occupations in which workers are suspected of having an elevated bladder cancer risk due to certain chemical exposures include working in the rubber and/or leather industries, dye manufacturing, painters, professional drivers of trucks and other motor vehicles, aluminum workers, machinists, chemical workers, printers, metal workers, hairdressers and textile workers
- Urologic conditions such as urinary tract infections and urinary stasis
- Dietary factors

BREAST

Risk Factors:

- Age (In Massachusetts, incidence rates increase markedly in the 45 to 64 year age group, and are highest in the 75 years and older age groups.)
- Family (mother, sister or daughter) history of breast cancer, especially if it was detected pre-menopausally (before the change of life)
- High-dose radiation therapy to the chest, especially from age 11 until age 30
- Never giving birth
- First childbirth after age 30
- Menstruating since age 12 or younger
- Late age (older than 55) at menopause (change of life)
- Having inherited a mutation in breast cancer susceptibility genes such as BRCA1 or BRCA2
- Increasing body fat in post-menopausal women
- Estrogen taken post-menopausally (after the change of life)
- More than three alcoholic drinks per day

Possible Risk Factors:

- Diet low in fruits and vegetables

Under Investigation:

- Pesticide exposure
- Other environmental exposures

CERVIX UTERI (cervical cancer)

Risk Factors:

- Age (In Massachusetts, incidence rates are highest in the 45 years and older age groups.)
- Certain types of human papilloma virus (HPV, the virus that causes genital warts)
- Sexual intercourse before age 19
- Multiple sexual partners
- Unprotected intercourse (having sex without a condom)
- Smoking
- Infection with HIV (human immunodeficiency virus, the virus that causes AIDS)

Possible Risk Factors:

- Too little vitamin A, vitamin C and/or folic acid in the diet
- Exposure to secondhand smoke (other people's smoke)

Use of the medication *diethylstilbestrol (DES)* during pregnancy is associated with later vaginal clear cell adenocarcinoma (a form of cervical and vaginal cancer) in the female children of those pregnancies.

COLON / RECTUM

Risk Factors:

- Age (In Massachusetts, incidence rates increase markedly in the 45 to 64 year age group, and continue to increase markedly in the 65 to 74 year and 75 to 84 year age groups.)
- A personal history of colorectal polyps or colorectal cancer
- Family history of colorectal cancer or polyps, including the various polyposis syndromes such as familial adenomatous polyposis, Gardner's Syndrome or Peutz-Jeghers Syndrome
- Personal history of inflammatory bowel disease such as ulcerative colitis or Crohn's Disease
- Personal history of ovarian, breast or endometrial cancer
- Diet high in red meat, and low in fruits, vegetables and folic acid
- Physical inactivity

Possible Risk Factors:

- Alcohol, especially beer
- Smoking
- Increasing body fat

LEUKEMIA

Risk Factors:

- Exposure to ionizing radiation
- Exposure to benzene
- Treatment with chemotherapy drugs (especially alkylating agents)
- Certain genetic conditions such as Down's syndrome
- Exposure to ethylene oxide

Possible Risk Factors:

- Exposure to low level solvent and metal mixtures
- Smoking

Under Investigation:

- Exposure to electromagnetic fields (e.g., from power lines)

LUNG AND BRONCHUS

Risk Factors:

- Smoking

  Note: 85% of all lung cancers are caused by smoking. The risk of lung cancer is *10 times greater* for persons who smoke up to one pack of cigarettes a day and *20 times greater* for persons who smoke more than one pack of cigarettes a day than for persons who do not smoke.
- Occupational, and in some cases environmental, exposures (e.g., asbestos, metals)
- Exposure to secondhand smoke (other people's smoke)

MELANOMA OF SKIN

Note: *changing or changed moles*, or *new moles which appear after age 30 that itch and are tender* are early, potentially malignant lesions, and should be examined by a health care professional.

Risk Factors:

- Age (In Massachusetts, incidence rates begin to increase markedly in the 45 to 65 year age group, and are highest in the 75 to 84 year age group.)
- One or more large or unevenly colored lesions such as:
  - -- Dysplastic mole(s), with or without a family history of melanoma
  - -- Lentigo maligna
- Familial atypical mole and melanoma syndrome
- Giant congenital melanocytic nevi (pigmented patches of skin)
- Nevus (birthmark) since birth
- Caucasian
- Previous melanoma
- Family history of melanoma
- Immunosuppression (when the body's defenses are weakened, such as after transplant surgery)
- Sun sensitivity
- Repeated sunburns, especially as a child
- Easily sunburned
- Freckling
- Unable to tan easily

NON-HODGKIN'S LYMPHOMA (now known as non-Hodgkin lymphoma)

Risk Factors:

- Age (In Massachusetts, incidence rates begin to increase in the 45 to 65 year age group, and are highest in the 75 to 84 year age group.)
- Abnormalities of the immune system, either congenital or resulting from suppression due to organ transplantation or disease
- Infection with HIV (human immunodeficiency virus, the virus that causes AIDS)
- Exposure to radiation or chemotherapy
- Exposure to certain herbicides

Possible Risk Factors:

- Smoking
- Other chemical exposures

ORAL CAVITY AND PHARYNX

Risk Factors:

- Tobacco use (including cigarettes, pipes, cigars, chewing tobacco and snuff)
- Heavy alcohol use
- Age (In Massachusetts, incidence rates begin to increase in the 45 to 64 year age group, and are highest in the 75 to 84 year age group.)
- Poor nutrition, especially chronic iron deficiency

Possible Risk Factors:

- Chronic irritation of the mouth due to ill-fitting dentures or broken teeth
- Poor oral hygiene

OVARY

Risk Factors:

- Age (In Massachusetts, incidence rates increase markedly in the 45 to 64 year age group, and are highest in the 65 to 74 year age group.)
- Never giving birth
- Personal history of endometrial (lining of the uterus), colon or breast cancer
- Family history of ovarian cancer (mother, sister or daughter)
- Having one of three inherited ovarian cancer conditions:
  - -- breast-ovarian cancer syndrome
  - -- site-specific ovarian cancer syndrome
  - -- hereditary nonpolyposis colorectal cancer or Lynch II syndrome (includes early-onset colorectal cancer, endometrial cancer, breast cancer and ovarian cancer)
- Never having used oral contraceptives, or having used oral contraceptives for fewer than five years
- Caucasian

Possible Risk Factors:

- Fertility drugs
- Use of talc powder containing asbestos fibers in the perineal or external genitalia area
- High fat diet

PROSTATE

Risk Factors:

- Age (In Massachusetts, incidence rates begin to increase markedly in the 45 to 64 year age group, and are highest in the 65 to 74 year age group.)
- Family history of prostate cancer
- Hormonal factors
- African-American

Possible Risk Factors:

- Alcohol consumption
- Having a history of benign prostate disease
- Smoking
- Physical inactivity
- Diet high in fat

TESTIS

Risk Factors:

- Age (In Massachusetts, incidence rates are highest in the 20 to 44 year age group.)
- Undescended testicle

Possible Risk Factors:

- Inguinal hernia
- Testicular trauma
- Familial factors
- Occupations related to leather processing

UTERI, CORPUS AND UTERUS, NOS (uterine cancer)

Risk Factors:

- Age (In Massachusetts, incidence rates are highest in the 45 years and older age groups.)
- Personal history of colon and/or breast cancer
- Family history of uterine cancer
- Being more than 20 pounds overweight
- Never giving birth
- Presence of estrogen-producing ovarian tumors
- Postmenopausal (change of life) use of estrogen without progesterone
- Tamoxifen (a drug given to women who have had breast cancer to lower the risk of recurrence)
- Late age (older than 55) at menopause (change of life)

Possible Risk Factors:

- Diet high in fatty foods
- Hypertension (high blood pressure)
- Diabetes (high blood sugar)
- Chronic anovulation (ovaries do not produce eggs)
- Menstrual problems
- Radiation therapy to the pelvis
- Malignant tumors on the ovaries
- Never having used oral contraceptives, or having used oral contraceptives for fewer than five years

Reviewers of Risk Factors

This Appendix was assembled under the auspices of the American Cancer Society (New England Division) through seeking the advice of leading cancer experts. The following clinicians, researchers and public health professionals reviewed the risk factors for the type(s) of cancers indicated:

Ross Berkowitz, MD (ovarian, uterine)

Cynthia Boddie-Willis, MD, MPH (prostate)

Risa Burns, MD (breast, cervical)

Richard Clapp, ScD (all types)

Graham Colditz, DrPH (colorectal)

Suzanne Condon, MS (all types)

Greg Connolly, DMD (lung)

Daniel Cramer, MD (ovarian)

Letitia Davis, ScD (all types)

Catherine DuBeau, MD (prostate)

Kathleen Egan, PhD (breast)

Richard Fabian, MD (oral)

Marc Garnick, MD (prostate, testicular)

Alan Geller, RN, MPH (melanoma)

Annekathryn Goodman, MD (uterine)

Lauren Holm, RN, MSN (all types)

David Hunter, MD, BS, ScD (all types)

Joe Jacobson, MD (prostate)

Phil Kantoff, MD (bladder, prostate)

Howard Koh, MD, MPH (melanoma)

Robert Krane, MD (testicular)

Frederick Li, MD (all types)

John Lisco, MPH (colorectal)

Robert Mayer, MD (colorectal)

Kenneth Miller, MD (leukemia)

Michael Monopoli, DMD (oral)

Nancy Mueller, ScD
(non-Hodgkin's lymphoma)

J. David Naparstek, ScM, CHO (all types)

Robert Osteen, MD (breast)

James Petros, MD (colorectal)

Marianne Prout, MD, MPH (all types)

Lowell Schnipper, MD
(non-Hodgkin's lymphoma)

Paul Schroy, MD, MPH (colorectal)

Ellen Sheets, MD (cervical)

William Shipley, MD (bladder)

Art Skarin, MD (lung)

Arthur Sober, MD (melanoma)

Bonnie Tavares, MEd (breast, cervical)

Howard Weinstein, MD (leukemia)

Martha Crosier Wood, MBA (all types)

and staff members of the Massachusetts Department of Public Health's Center of Environmental Health Assessment (all types), Colorectal Cancer Working Group (colorectal), Skin Cancer Prevention Program (melanoma), and Massachusetts Women's Health Network (breast, cervical).

We would also particularly like to thank Lauren Holm, former Vice President for Planning and Evaluation, American Cancer Society (New England Division) and Martha Crosier Wood, former Director, Comprehensive Cancer Prevention and Control, Massachusetts Department of Public Health for their assistance in the development of this Appendix.

APPENDIX III: MDPH CANCER CONTROL INITIATIVES AND PUBLICATIONS

This Appendix was developed by the Comprehensive Cancer Prevention and Control Program of the Bureau of Family and Community Health, Massachusetts Department of Public Health (MDPH). The MDPH is working to reduce the incidence and mortality of cancer throughout the Commonwealth. The following is a description of some of the current efforts to reduce the risk of specific cancers. For further information about specific cancers or cancer-related programs and issues, please call the Coordinator of Comprehensive Cancer Prevention and Control at 617-624-5480.

BLADDER CANCER

- The incidence of bladder cancer increases with age and is three times more common in men than in women. Smoking appears to double a person's risk of bladder cancer.

- MDPH is currently working to reduce the incidence of bladder cancer through the following activities:
- initiating an extensive program of tobacco-control activities. For specific activities, refer to the strategies of the Massachusetts Tobacco Control Program as listed under the section for *Lung Cancer*;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996*, which include information on bladder cancer.

BREAST CANCER

Breast cancer is the most common cancer in women in Massachusetts and throughout the United States.

In 1992, MDPH launched a breast and cervical cancer screening program for uninsured and underinsured eligible women in order to detect these diseases when they are most treatable. In addition, in 1992 the state legislature allocated moneys for a breast cancer research program. Funding for research increased in subsequent years however, the research program was eliminated in 2002 due to state budget cuts.
MDPH is currently involved in numerous activities to address breast cancer in Massachusetts, including:

- providing free mammograms and clinical breast examinations for uninsured and underinsured eligible women via the Massachusetts Women's Health Network;
- developing and disseminating materials on the Massachusetts Women's Health Network, especially for low-literacy, culturally diverse, and non-English speaking women;
- training community health outreach workers on communicating risk factors and screening options with culturally and ethnically diverse populations;
- enhancing clinical and diagnostic skills of clinicians throughout Massachusetts by providing continuing education training;
- providing continuing education for mammography technologists;
- promoting public and professional awareness of issues related to the genetics of breast cancer;
- working to reduce possible risk factors associated with breast cancer such as poor nutrition and lack of physical activity;
- providing a clearinghouse of publications concerning breast cancer;

- developing statistical publications, such as *Cancer in Massachusetts Women 1989-1998*, which include information on breast cancer.

CERVICAL CANCER

Cancer of the cervix uteri is highly curable when detected at an early, pre-invasive stage.

MDPH is currently involved in the following cervical cancer prevention and control activities:

- providing free Pap tests for uninsured and underinsured eligible women and teens via the Massachusetts Women's Health Network and Family Planning programs;
- training community health outreach workers on communicating risk factors and screening options with culturally and ethnically diverse populations;
- educating medical professionals on counseling patients about cervical cancer and performing cervical cancer screenings;
- working to reduce the risk of cervical cancer associated with exposure to tobacco smoke and sexually transmitted diseases;
- providing continuing education for cytotechnologists on cervical cytology;
- developing statistical publications, such as *Cancer in Massachusetts Women 1989-1998*, which include information on cervical cancer;
- providing a clearinghouse of publications concerning cervical cancer;
- implementing prevention programs to address viral sexually transmitted diseases, such as HPV, herpes virus and HIV infection.

COLORECTAL CANCER

Colorectal cancer is the second leading cause of cancer death in Massachusetts. It may be prevented through lifestyle changes including a healthy diet, increased physical activity, and tobacco cessation. Both incidence and mortality from colorectal cancer can be greatly decreased through routine screening and early detection.

To reduce the burden of this disease, MDPH formed the Massachusetts Colorectal Cancer Working Group in partnership with the American Cancer Society, University of Massachusetts Medical School, Dana-Farber Cancer Institute, Harvard School of Public Health, Boston University Medical School, and others.

MDPH is working to reduce the incidence of colorectal cancer through the following activities:

- co-sponsoring trainings and conferences for health care outreach workers and health care professionals;
- distributing information on colorectal cancer prevention and screening to health care professionals in the Commonwealth;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996* and *Cancer in Massachusetts Women 1989-1998,* which include information on colorectal cancer;
- producing public information posters and brochures, including *You Can Prevent Colorectal Cancer* and *Take Control: Get Tested for Colorectal Cancer*; in a variety of languages.
- Conducting surveys to determine Massachusetts health care providers' knowledge, perceptions, and screening practices regarding colorectal cancer;
- increasing public understanding of colorectal cancer risk factors;
- conducting statewide media campaigns to increase public awareness.

LEUKEMIA

Leukemia is the most common cancer to be diagnosed in children. However, adults account for almost 90% of new cases of leukemia, despite the common belief that it is primarily a childhood disease. There are several types of acute and chronic leukemia, which are classified according to the cell type involved. Although the incidence of leukemia has not changed dramatically over the past 50 years, survival rates have increased for some forms of the disease.

MDPH's current activities around leukemia include:

- responding to citizen inquiries about leukemia;
- providing technical assistance and resources to schools on care of children with leukemia in educational settings;
- providing information on care coordination for children with leukemia for families who request it;
- providing support and networking opportunities with other families for families of children with leukemia;
- developing statistical publications, such as *Childhood Cancer in Massachusetts,* which include information on leukemia;
- conducting environmental epidemiological investigations in several Massachusetts communities.

LUNG CANCER

Lung cancer is the leading cause of cancer death for both men and women. Despite high incidence and mortality rates and the lack of screening tests, lung cancer is a largely preventable disease. Since 85% of lung cancers can be attributed to cigarette smoke, the most effective strategy for preventing lung cancer is through tobacco control. Several prospective studies show that a former smoker's risk of developing lung cancer can be reduced by half within five years. The risk of lung cancer from smoking may be augmented by other factors including exposure to carcinogens.

MDPH, mainly through the Massachusetts Tobacco Control Program, is working to reduce the risk of lung cancer through the following activities:

- helping smokers quit smoking through statewide services including the Try to Stop Tobacco Resource Center's telephone helpline (1-800-trytostop), website (www.trytostop.org), and educational print materials;
- Utilizing QuitWorks program to provide health care clinicians with a simple approach to treating their patients who smoke by linking them to proactive telephone counseling and the state's range of effective tobacco treatment services;
- providing funding and training to local boards of health to promote and enforce local regulations that reduce youth access to tobacco products and reduce exposure to environmental tobacco smoke;
- raising public awareness about the health issues related to tobacco use and the need for tobacco control public policy initiatives through community-based Tobacco Free Community Mobilization Networks;
- measuring changes in adult and youth attitudes toward tobacco use;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996* and *Cancer in Massachusetts Women 1989-1998,* which include information on lung cancer;
- conducting public awareness programs around the risk of lung cancer that is associated with exposure to radon gas;
- researching possible environmental links to lung cancer.

NON-HODGKIN'S LYMPHOMA

Massachusetts' activities around non-Hodgkin's lymphoma include:

- responding to citizen inquiries about non-Hodgkin's lymphoma;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996*, which include information on non-Hodgkin's lymphoma.

ORAL CANCER

Tobacco and excessive alcohol use are the greatest risk factors for oral cancer. However, poor nutrition, poor oral hygiene, and chronic irritation of the mouth due to ill-fitting dentures or broken teeth also play a role. Early detection of oral cancer can significantly reduce morbidity and mortality.

MDPH, in partnership with the Boston University School of Dental Medicine, Harvard School of Dental Medicine, Tufts University School of Dental Medicine, Forsythe Institute, American Cancer Society, and Massachusetts Dental Society, has formed the Oral Cancer Partnership and is currently involved in reducing the risk of oral cancer through the following activities:

- educating the public about oral cancer through outreach and distribution of educational materials;
- educating primary care providers involved with populations at high risk for oral cancer;
- promoting tobacco cessation;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996*, which include information on oral cancer;

OVARIAN CANCER

Ovarian cancer is the fourth most frequent cause of cancer death in women in the United States. It is curable when detected early. However, because there is no general screening method, and it has no symptoms in its early stages, ovarian cancer often goes undetected. MDPH, in partnership with the Massachusetts Chapter of the National Ovarian Cancer Coalition, the Ovarian Cancer Education and Awareness Network (OCEAN), the Rendon Group, Massachusetts General Hospital, Harvard Medical School, Dana-Farber Cancer Institute, and Brigham and Women's Hospital, has formed the Massachusetts Ovarian Cancer Awareness Partnership and is currently involved in raising awareness of ovarian cancer through the following activities:

- promoting public and professional awareness of issues related to ovarian cancer;
- promoting public awareness of how to decrease the risk of ovarian cancer through the Massachusetts Women's Health Network, Women, Infants and Children (WIC) and Family Planning;
- developing statistical publications, such as *Cancer in Massachusetts Women 1989-1998*, which include information on ovarian cancer.

PROSTATE CANCER

Prostate cancer is the most common cancer in men in Massachusetts, with the exception of skin cancer. MDPH, in partnership with the Massachusetts Prostate Cancer Coalition, and community based partnership organizations works to reduce prostate cancer incidence and mortality and to address issues of quality of life for prostate cancer survivors and their families. The following MDPH activities are currently underway to address prostate cancer:

- increasing knowledge and awareness among men and their families about prostate cancer through a variety of community-based programs and media strategies;
- developing and distributing educational materials about prostate cancer that are culturally sensitive and available in several (six) languages and at varying literacy levels;
- linking uninsured and underinsured men with medical care, including prostate cancer screening through thirteen Men's Health Partnership sites;
- funding prostate cancer survivor support groups across Massachusetts;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men* 1996-2000, which include information on prostate cancer;
- co-sponsoring an annual prostate cancer symposium;
- providing publications concerning prostate cancer through the Massachusetts Health Promotion Clearinghouse;
- co-sponsoring trainings for health care outreach workers and health care professionals.

SKIN CANCER (INCLUDING MELANOMA)

Skin cancer is the most common and preventable form of cancer in the United States. Almost all skin cancers are curable if detected and treated early, before they have spread to other tissues. Exposure to ultraviolet radiation, most frequently from the sun but also from tanning beds and booths, is the primary cause of skin cancer.

MDPH, in partnership with the American Cancer Society, Boston University School of Medicine, the Dana-Farber Cancer Institute, the Harvard School of Public Health, the Massachusetts Melanoma Foundation, and other organizations and individuals, have formed the Massachusetts Skin Cancer Prevention Collaborative to address skin cancer in Massachusetts.

MDPH is currently involved in the following activities to prevent skin cancer:

- helping hospital maternity units to develop skin cancer prevention programs for mothers of newborns;
- assisting communities developing local skin cancer prevention programs;
- helping summer camps, child care centers, and schools develop programs and policies to prevent skin cancer;
- training child care workers on safe sun practices;
- developing and distributing skin cancer prevention materials including tip cards and posters;
- increasing awareness among health professionals;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996* and *Cancer in Massachusetts Women 1989-1998,* which include information on melanoma, the most deadly form of skin cancer;
- exploring other venues of recreational exposure, including Little Leagues.

TESTICULAR CANCER

Testicular cancer accounts for 1% of all cancers in Massachusetts males. In Massachusetts, testicular cancer is the most common cancer in men ages 20 to 44.

Massachusetts is currently working to reduce the risk of testicular cancer through the following efforts:

- including testicular cancer self-examination as part of Massachusetts' recommended school health curriculum;
- developing and distributing testicular cancer public and professional information materials;
- developing statistical publications, such as *Selected Cancers in Massachusetts Men 1982-1996*, and 1996-2000, which include information on testicular cancer.

UTERINE CANCER

There is currently no screening test for uterine cancer. The Pap smear, which is used to detect cervical cancer, finds fewer than half of endometrial (uterine) cancers.

MDPH is currently working to address uterine cancer through the following activities:

- providing information concerning uterine cancer through the Massachusetts Women's Health Network and Family Planning programs;
- developing statistical publications, such as *Cancer in Massachusetts Women 1989-1998*, which include information on uterine cancer.

Cancer-Related Publications from the Massachusetts Department of Public Health (MDPH)

Breast and Cervical Cancer
available through Massachusetts Health Promotion Clearinghouse, telephone 1-800-952-6637, website www.maclearinghouse.com:
Bilingual Mammography Patient's "Bill of Rights" *(information card, available in English/Spanish)*
Bilingual Mammography Patient's "Bill of Rights" *(poster, available in English/Spanish)*
Massachusetts Breast Cancer Research Program *(booklet for researchers)*
They Say The Best Things In Life Are Free *(poster)*
What You Should Know about Breast Cancer *(brochure, available in English, Spanish, Portuguese, Haitian Creole, Vietnamese, and Chinese)*
What You Should Know about Cervical Cancer *(brochure, available in English, Spanish, Portuguese, Haitian Creole, Vietnamese, and Chinese)*
available through Massachusetts Department of Public Health Women's Health Network, telephone 1-877-414-4447:
Women's Health Network Bilingual Information Card *(eligibility criteria and contact information for free health screening, available in Chinese, English, Haitian Creole, Khmer, Lao, Portuguese, Russian, Spanish, Vietnamese)*
Bilingual Women's Health Network *(wallet card)*
Women's Health Network Passport Health Guide *(booklet, available in English, Spanish, Portuguese, Chinese, and Vietnamese)*
Women's Health Network Program Point of Purchase Display *(stand with tear-off cards)*
You are the difference (*video, 12:55 min ,in English, promotes the importance of regular screenings and includes personal accounts from women who have participated in WHN, #BC083).*

Colorectal Cancer
available through Massachusetts Health Promotion Clearinghouse, telephone 1-800-952-6637, website www.maclearinghouse.com:
Colorectal Cancer Prevention *(laminated reference card for health care professionals)*
Take Control. Get Tested for Colorectal Cancer *(public brochure, available in Chinese, English, French, Portuguese, Russian, Spanish)*
You Can Prevent Colorectal Cancer *(public brochure, available in Chinese, English, French, Khmer, Portuguese, Russian, Spanish, Vietnamese; also available as a fact sheet in Bosnian)*
available through American Digestive Health Foundation, telephone 1-800-668-5237:
Women and Colorectal Cancer: What Are the Facts *(brochure, available in English and Spanish)*

Ovarian Cancer
To order any of these pamphlets, send requests via mail or fax to:
National Ovarian Cancer Coalition, Inc.
500 NE Spanish River Blvd, Ste 14
Boca Raton, FL 33431-4516
main telephone: 561-393-0005, fax 561-393-7275
information line: 1-888-682-7426 (1-888-OVARIAN)
website: www.ovarian.org
Myths & Facts about Ovarian Cancer. What You Need to Know (2nd ed.)
by M. Steven Piver, MD and Gamal Eltabbakh, MD
National Ovarian Cancer Coalition. Working to Raise Awareness About Ovarian Cancer Risks and Symptoms
Ovarian Cancer…It Whispers…So Listen
Patient to Patient *(patient resource for women with ovarian cancer)*

What Every Woman Should Know About Ovarian Cancer
Ovarian Cancer Reference Card (*a wallet- sized card that provides facts, symptoms and resources*)

Prostate Cancer
available through Massachusetts Health Promotion Clearinghouse, telephone 1-800-952-6637:
What Every Man Should Know About Prostate Cancer *(public brochure, available in Chinese, English, Haitian Creole, Portuguese, Russian, Spanish)*
Prostate Cancer Fact Sheet *(fact sheet available in English, Spanish, Portuguese)*
available through MDPH Men's Health Initiative, fax 617-624-5075:

Skin Cancer
To order the following materials, send requests to:
MDPH Skin Cancer Prevention Program
250 Washington St, 4th Floor
Boston, MA 02108-4619
telephone: 617-624-5441
fax: 617-624-5075
Massachusetts Department of Public Health materials:
Ban the Burn Tip Sheet -- General *(available in English, Portuguese, Spanish)*
Ban the Burn Tip Sheet -- Newborns *(available in English, Portuguese, Spanish)*
Ban the Burn Tip Sheet -- Preschoolers *(available in English, Portuguese, Spanish)*
Ban the Burn Resource Guide
Every Day is a SunDay Coloring Calendar and Curriculum Guide
Ban the Burn Temporary Tattoos
Have a Changing Mole? *(poster)*
Have a Changing Mole? (*pocket card for patients)*
Have a Changing Mole? (*pocket card for physicians)*
Ban the Burn *(poster)*

Centers for Disease Control and Prevention materials:
Choose Your Cover:
Parents *(brochure)*

American Academy of Dermatology materials:
Kids, Use Your ABC's For Safe Fun in the Sun
Stop! Look for the Danger Signs

Created by Boston University:
Sun Protection Policy and Counselor Handbook *(for camp counselors)*

Nutrition

available through Massachusetts 5 A Day Program, Massachusetts Department of Public Health, telephone 617-624-5418:
African Americans Take the 5 A Day Challenge for Better Health *(brochure)*
Eat 5 Fruits and Vegetables Every Day *(brochure, available in English and Spanish)*
Energizing Tips for a Healthier Family *(brochure)*
Time to Take Five: Eat 5 Fruits and Vegetables A Day *(brochure)*
5 A Day Recipe Cards *(set of 10 cards)*

available through Massachusetts Department of Public Health Cancer Prevention and Control Program, telephone 617-624-5070:
Snack Your Way to 5 A Day (brochure available in English)
Down Home Healthy Cookin' Recipe Book (book in English)
Color Your Way Pocket Guide (purse size brochure)
Men Eat 9 A Day (brochure in English for men of color)

Physical Activity

To order any of these materials, send requests via mail or fax to:
Massachusetts Health Promotion Clearinghouse
The Medical Foundation
95 Berkeley St
Boston, MA 02116
fax: 617-536-8012
Physical Activity Fact Sheets *(reproducible facts sheets from the American Council on Exercise)*
A Walk A Day…
Active Seniors Enjoy Life More
Exercise and Menopause
Exercise and Pregnancy
Kids in Motion
Making Time for Exercise is Easy
Moderate Exercise Will Do You A Lot of Good
Physical Activity Pyramid
The Right Exercise Program for You Starts Here
Three Things Every Exercise Program Should Have

Tobacco

These materials may be ordered from:
Try-to-Stop Tobacco Resource Center
JSI Research and Training Institute, Inc.
44 Farnsworth St
Boston, MA 02122-1211
telephone: 617-482-9485, fax: 617-482-0617
e-mail: mtec@jsi.com
The Try-to-Stop Tobacco Resource Center offers education pamphlets, booklets, signs, posters, fact sheets and other items. Tobacco information and cessation materials are available in ten languages. You may obtain a copy of the current order form by contacting the Try-to-Stop Tobacco Resource Center at 617-482-9485.

Miscellaneous

Take Charge: Medicare Part B Benefits and You (*video, 15 min, in English, provides an overview of the screening benefits covered under Medicare Part B.Video is designed to increase awareness about the prevention benefits under Medicare Part B, and to increase screening rates for Medicare beneficiaries, # BC089).*

Other Massachusetts Cancer Registry Publications

available through the Massachusetts Cancer Registry, telephone 617-988-3380:
Cancer Incidence and Mortality in Massachusetts 1996-2000,1997-2001(*to be released*)
Cancer in Massachusetts Women 1989-1998
Childhood Cancer in Massachusetts 1990-1999
Selected Cancers in Massachusetts Men 1982-1996
Massachusetts Cancer Registry Public Information Brochure *(available in English, Portuguese, Spanish)*

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